

Archives of  
**Microbiology**

Founded in 1930 as  
Archiv für Mikrobiologie

Volume 130 1981

Managing Editors:

G. Drews · J. L. Ingraham · H. G. Schlegel

Editorial Board

K. Altendorf, Osnabrück  
W. Boos, Konstanz  
V. Braun, Tübingen  
N. G. Carr, Liverpool  
G. Drews, Freiburg i. Br.  
K. Esser, Bochum  
S. Fukui, Kyoto  
G. Gottschalk, Göttingen  
R. Hütter, Zürich  
J. L. Ingraham, Davis  
H. W. Jannasch, Woods Hole  
D. P. Kelly, Coventry

E. N. Kondratieva, Moscow  
H. Larsen, Trondheim  
M. Mandel, Houston  
B. Marrs, Saint Louis  
B. A. McFadden, Pullman  
N. Pfennig, Konstanz  
M. R. J. Salton, New York  
H. G. Schlegel, Göttingen  
R. Y. Stanier, Paris  
H. Stolp, Bayreuth  
R. Thauer, Marburg



Springer International

The exclusive copyright for all languages and countries, including the right for photo-mechanical and any other reproductions, also in microform, is transferred to the publisher.

The use of registered names, trademarks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

Authors of this journal can benefit from library and photocopy fees collected by WORT if certain conditions are met. If an author lives in the Federal Republic of Germany or in West Berlin it is recommended that he contacts Verwertungsgesellschaft WORT, Abteilung Wissenschaft, Goethestrasse 49, D-8000 München 2, for detailed information.

Die in der Zeitschrift veröffentlichten Beiträge sind urheberrechtlich geschützt. Alle Rechte, insbesondere das der Übersetzung in fremde Sprachen, vorbehalten. Kein Teil dieser Zeitschrift darf ohne schriftliche Genehmigung des Verlages in irgendeiner Form — durch Fotokopie, Mikrofilm oder andere Verfahren — reproduziert oder in eine von Maschinen, insbesondere von Datenverarbeitungsanlagen, verwendbare Sprache übertragen werden.

Auch die Rechte der Wiedergabe durch Vortrag, Funk- und Fernsehsendung, im Magnettonverfahren oder ähnlichem Wege bleiben vorbehalten.

Fotokopien für den persönlichen und sonstigen eigenen Gebrauch dürfen nur von einzelnen Beiträgen oder Teilen daraus als Einzelkopien hergestellt werden. Jede im Bereich eines gewerblichen Unternehmens hergestellte oder benutzte Kopie dient gewerblichen Zwecken gem. § 54 (2) UrhG und verpflichtet zur Gebührenzahlung an die VG WORT, Abteilung Wissenschaft, Goethestrasse 49, D-8000 München 2, von der die einzelnen Zahlungsmodalitäten zu erfragen sind.

Autoren dieser Zeitschrift können unter gewissen Voraussetzungen in die Individualausschüttung von Mitteln aus der Bibliothekantime und dem Fotokopieraufkommen mit einbezogen werden. Genaue Informationen erteilt die Verwertungsgesellschaft WORT, Abteilung Wissenschaft, Goethestrasse 49, D-8000 München 2.

Die Wiedergabe von Gebrauchsnamen, Handelsnamen, Warenbezeichnungen usw. in dieser Zeitschrift berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, daß solche Namen im Sinne der Warenzeichen- und Markenschutz-Gesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Springer-Verlag Berlin Heidelberg New York

Printed in Germany by Wiesbadener Graphische Betriebe GmbH, D-6200 Wiesbaden

© by Springer-Verlag Berlin · Heidelberg 1981

# Contents

- Abel, K. M.**, see Andrews, T. J., et al. 344
- Afring, R. P., Taylor, B. F.**  
Aerobic and Anaerobic Catabolism of Phthalic Acid by a Nitrate-Respiring Bacterium 101
- Ahmad, M. H., Eaglesham, A. R. J., Hassouna, S.**  
Examining Serological Diversity of "Cowpea" Rhizobia by the ELISA Technique 281
- Alef, K., Arp, D. J., Zumft, W. G.**  
Nitrogenase Switch-off by Ammonia in *Rhodopseudomonas palustris*: Loss Under Nitrogen Deficiency and Independence from the Adenylation State of Glutamine Synthetase 138
- Andrews, T. J., Abel, K. M., Menzel, D., Badger, M. R.**  
Molecular Weight and Quaternary Structure of Ribulose Biphosphate Carboxylase from the Cyanobacterium, *Synechococcus* sp. 344
- Anke, T.**, see Kupka, J., et al. 223
- Arp, D. J.**, see Alef, K., et al. 138
- Baalen, C. van**, see Cerniglia, C. E., et al. 272
- Bache, R., Pfennig, N.**  
Selective Isolation of *Acetobacterium woodii* on Methoxylated Aromatic Acids and Determination of Growth Yields 260
- Bachofen, R.**, see Meyer, R., et al. 125
- Badger, M. R.**, see Andrews, T. J., et al. 344
- Baldrián, J.**, see Holan, H., et al. 312
- Balkwill, D. L.**, see Stevens, S. E., Jr., et al. 204
- Bang, S. S., Baumann, L., Woolkalis, M. J., Baumann, P.**  
Evolutionary Relationships in *Vibrio* and *Photobacterium* as Determined by Immunological Studies of Superoxide Dismutase 111
- Banks, D. H.**, see Hindahl, M. S., et al. 307
- Bansal, V. S., Khuller, G. K.**  
Changes in Phospholipids of *Microsporum species* in the Presence of Ethanol 248
- Barz, W.**, see Weltring, K.-M., et al. 381
- Baumann, L.**, see Bang, S. S., et al. 111
- Baumann, P.**, see Bang, S. S., et al. 111
- Bazin, M. J.**, see Theodorou, M. K., et al. 372
- Benson, D.**, see Cox, C., et al. 165
- Beran, K.**, see Holan, H., et al. 312
- Birch-Andersen, A.**, see Hovind-Hougen, K., et al. 339
- Bock, E.**, see Sundermeyer, H. 250
- Bothe, H., Klein, B., Stephan, M. P., Döbereiner, J.**  
Transformation of Inorganic Nitrogen by *Azospirillum* spp. 96
- Braun, V.**, see Hartmann, A. 353
- Buchanan, B. B.**, see Yee, B. C., et al. 14
- Burris, R. H.**, see Ludden, P. W. 155
- Bus, S.**, see Claassen, V. P., et al. 44
- Cantino, E. C.**, see Mills, G. L. 72
- Carlson, D. E.**, see Yee, B. C., et al. 14
- Cerniglia, C. E., Freeman, J. P., Baalen, C. van**  
Biotransformation and Toxicity of Aniline and Aniline Derivatives in Cyanobacteria 272
- Choi, S.**, see Fenn, P., et al. 66
- Cinco, M.**, see Hovind-Hougen, K., et al. 339
- Claassen, V. P., Oltmann, L. F., Bus, S., t'Riet, J. v., Stouthamer, A. H.**  
The Influence of Growth Conditions on the Synthesis of Molybdenum Cofactor in *Proteus mirabilis* 44
- Codd, G. A.**, see Lanaras, T. 213
- Colombetti, G.**, see Häder, D.-P., et al. 78
- Cordier, J.-L.**, see Ebersold, H. R., et al. 19
- Cox, C., Benson, D., Dwart, D. M.**  
Ultrastructure of a Cave-Wall Cyanophyte-*Gloeocapsa* NS4 165
- Crameri, R.**, see Hintermann, G., et al. 218
- Crawford, N. A.**, see Yee, B. C., et al. 14
- Cuhel, R. L., Taylor, C. D., Jannasch, H. W.**  
Assimilatory Sulfur Metabolism in Marine Microorganisms: Sulfur Metabolism, Growth, and Protein Synthesis of *Pseudomonas halodurans* and *Alteromonas luteo-violaceus* During Sulfate Limitation 1
- Cuhel, R. L., Taylor, C. D., Jannasch, H. W.**  
Assimilatory Sulfur Metabolism in Marine Microorganisms: Sulfur Metabolism, Protein Synthesis, and Growth of *Pseudomonas halodurans* and *Alteromonas luteo-violaceus* During Unperturbed Batch Growth 8
- Decker, K.**, see Rösle, M. 288
- Derylo, M., Glowacka, M., Skorupska, A., Lorkiewicz, Z.**  
Nif Plasmid from *Lignobacter* 322
- Dewick, P. M.**, see Weltring, K.-M., et al. 381
- Döbereiner, J.**, see Bothe, H., et al. 96
- Dreus, G.**  
*Rhodospirillum salexigens*, spec. nov., an Obligatory Halophilic Phototrophic Bacterium 325
- Durrans, P.**  
The Phenoloxidases of the Ascomycete *Podospira anserina*: The Three Forms of the Major Laccase Activity 121
- Dwarts, D. M.**, see Cox, C., et al. 165
- Eaglesham, A. R. J.**, see Ahmad, M. H., et al. 281
- Ebersold, H. R., Cordier, J.-L., Lüthy, P.**  
Bacterial Mesosomes: Method Dependent Artifacts 19
- Ebersold, H.-R.**, see Stucki, G., et al. 366
- Eggeling, L., Sahm, H.**  
Enhanced Utilization-Rate of Methanol During Growth on a Mixed Substrate: A Continuous Study with *Hansenula polymorpha* 362
- Fenn, P., Choi, S., Kirk, T. K.**  
Ligninolytic Activity of *Phanerochaete chrysosporium*. Physiology of Suppression by  $\text{NH}_4^+$  and L-Glutamate 66
- Fenn, P., Kirk, T. K.**  
Relationship of Nitrogen to the Onset and Suppression of Ligninolytic Activity and Secondary Metabolism in *Phanerochaete chrysosporium* 59

- Fischer, U., see Steinmetz, M. A. 31
- Freeman, J. P., see Corniglia, C. E., et al. 272
- Friedberg, I., see Michels, P. A. M., et al. 357
- Friedmann, E. J., see Potts, M. 267
- Fuchs, G., see Stupperich, E. 294
- Fuggi, A., Martino Rigano, V. di, Vona, V., Rigano, C.  
Pattern of Inhibition of Nitrate Utilization by Ammonium in  
the Acidophilic Thermophilic Unicellular Alga *Cyanidium*  
*caldarium* 349
- Furter, R., see Müller, H., et al. 195
- Gaal, A., Neujahr, H. Y.  
Induction of Phenol-Metabolizing Enzymes in *Trichosporan*  
*cutaneum* 54
- Galli, R., see Stucki, G., et al. 366
- Galun, E., see Galun, M., et al. 105
- Galun, M., Malki, D., Galun, E.  
Visualization of Chitin-Wall Formation in Hyphal Tips and  
Anastomoses of *Diplodia natalensis* by Fluorescein-  
Conjugated Wheat Germ Agglutinin and [<sup>3</sup>H]N-Acetyl-D-  
Glucosamine 105
- Gemperle, A., see Holan, H., et al. 312
- Giannetti, B.-M., see Kupka, J., et al. 223
- Gibson, J.  
Movement of Acetate Across the Cytoplasmic Membrane  
of the Unicellular Cyanobacteria *Synechococcus* and  
*Aphanocapsa* 175
- Glazer, A. N., see Yamanaka, G. 23
- Glowacka, M., see Derylo, M., et al. 322
- Gopinathan, K. P., see Karnik, S. S. 50
- Grant, W. D., see Imhoff, J. F., et al. 238
- Gutnick, D. L., see Pines, O. 129
- Häder, D.-P.  
Electrical and Proton Gradients in the Sensory Transduction  
of Photophobic Responses in the Blue-Green Alga,  
*Phormidium uncinatum* 83
- Häder, D.-P., Colombetti, G., Lenci, F., Quaglia, M.  
Phototaxis in the Flagellates, *Euglena gracilis* and  
*Ochromonas danica* 78
- Hamagishi, Y., Yoshimoto, A., Oki, T.  
Determination of Guanosine Tetraphosphate (ppGpp) and  
Adenosine Pentaphosphate (pppApp) in Various  
Microorganisms by Radioimmunoassay 134
- Hare, P., Long, S., Robb, F. T., Woods, D. R.  
Regulation of Exoprotease Production by Temperature and  
Oxygen in *Vibrio alginolyticus* 276
- Hartmann, A., Braun, V.  
Iron Uptake and Iron Limited Growth of *Escherichia*  
*coli* K-12 353
- Hashwa, F., see Imhoff, J. F., et al. 234
- Hassouna, S., see Ahmad, M. H., et al. 281
- Heinen, W., see Lauwers, A. M., et al. 159
- Hellingwerf, K. L., see Michels, P. A. M., et al. 357
- Hennecke, H., see Kaluza, K. 38
- Hensel, G., Trüper, H. G.  
O-Acetylserine Sulfhydrylase and S-Sulfocysteine Synthase  
Activities of *Chromatium vinosum* 228
- Higuchi, T., see Katayama, T., et al. 198
- Hindahl, M. S., Wee, S., Banks, D. H., Tsang, J. C.,  
Wilkinson, B. J.  
Removal of *Paracoccus denitrificans* Outer Membrane  
Material by Sodium Chloride 307
- Hintermann, G., Cramer, R., Kieser, T., Hütter, R.  
Restriction Analysis of the *Streptomyces glaucescens*  
Genome by Agarose Gel Electrophoresis 218
- Holan, H., Pokorný, V., Beran, K., Gemperle, A.,  
Tuzar, Z., Baldrián, J.  
The Glucan-Chitin Complex in *Saccharomyces cerevisiae*.  
V. Precise Location of Chitin and Glucan in Bud Scar and  
Their Physico-Chemical Characterization 312
- Hovind-Hougen, K., Cinco, M., Roomans, G. M., Birch-  
Andersen, A.  
Electron Microscopy and X-Ray Microanalysis of a  
Halophilic Leptospire 339
- Hütter, R., see Hintermann, G., et al. 218
- Imhoff, J. F., Then, J., Hashwa, F., Trüper, H. G.  
Sulfate Assimilation in *Rhodospseudomonas globiformis*  
234
- Imhoff, J. F., Tindall, B. J., Grant, W. D., Trüper, H. G.  
*Ectothiorhodospira vacuolata* sp. nov., a New Phototrophic  
Bacterium from Soda Lakes 238
- Imura, N., see Pan-Hou, H. S., et al. 93
- Jannasch, H. W., see Cuhel, R. L., et al. 1, 8
- Kaiser, P., see Reber, H. H. 243
- Kaluza, K., Hennecke, H.  
Regulation of Nitrogenase Messenger RNA Synthesis and  
Stability in *Klebsiella pneumoniae* 38
- Karnik, S. S., Gopinathan, K. P.  
Presence of Nucleoside Triphosphates and Calcium  
Associated with Mycobacteriophage 13 50
- Katayama, T., Nakatsubo, F., Higuchi, T.  
Degradation of Arylglycerol- $\beta$ -Aryl Ethers, Lignin  
Substructure Models, by *Fusarium solani* 198
- Khuller, G. K., see Bansal, V. S. 248
- Kieser, T., see Hintermann, G., et al. 218
- Kirk, T. K., see Fenn, P. 59
- Kirk, T. K., see Fenn, P., et al. 66
- Klein, B., see Bothe, H., et al. 96
- Knobloch, K., see Schleifer, G. 328
- Knobloch, K., see Schmitt, W., et al. 334
- Konings, W. N., see Michels, P. A. M., et al. 357
- Kosaki, G., see Tkata, N., et al. 90
- Kreusch, J., see Rössle, M., et al. 288
- Krüger, W. M. A. von, Parish, J. H.  
 $\beta$ -Lactamase Activity and Resistance to Penicillins in  
*Myxococcus xanthus* 150

- Kupka, J., Anke, T., Giannetti, B.-M., Steglich, W.  
Antibodies from Basidiomycetes. XIV. Isolation and  
Biological Characterization of Hypnophilin, Pleurotellol, and  
Pleurotellic Acid from *Pleurotellus hypnophilus* (Berk.)  
Sacc. 223
- Lanaras, T., Codd, G. A.  
Structural and Immunoelectrophoretic Comparison of  
Soluble and Particulate Ribulose Biphosphate  
Carboxylases from the Cyanobacterium *Chlorogloeopsis  
fritschii* 213
- Lara, C., see Yee, B. C., et al. 14
- Lauwers, A. M., Heinen, W., Mulders, J. W. M.  
Properties of Enzymes from Bacteria Grown in the  
70–100°C Range 159
- Leisinger, T., see Stucki, G., et al. 366
- Lenci, F., see Häder, D.-P., et al. 78
- Lolkema, J. S., see Michels, P. A. M., et al. 357
- Long, S., see Hare, P., et al. 276
- Lorkiewicz, Z., see Derylo, M., et al. 322
- Ludden, P. W., Burris, R. H.  
In vivo and in vitro Studies on ATP and Electron Donors to  
Nitrogenase in *Rhodospirillum rubrum* 155
- Lüthy, P., see Ebersold, H. R., et al. 19
- Maass, D., Pelzer, H.  
Murein Biosynthesis in Ether Permeabilized *Escherichia coli*  
Starting from Early Peptidoglycan Precursors 301
- Malki, D., see Galun, M., et al. 105
- Martino Rigano, V. di, see Fuggi, A., et al. 349
- Menzel, D., see Andrews, T. J., et al. 344
- Meyer, R., Snozzi, M., Bachofen, R.  
Freeze Fracture Studies of Reaction Centers from  
*Rhodospirillum rubrum* in Chromatophores and  
Liposomes 125
- Michels, P. A. M., Hellingwerf, K. L., Lolkema, J. S.,  
Friedberg, I., Konings, W. N.  
Effect of the Medium Composition on the Components of  
the Electrochemical Proton Gradient in *Rhodopseudomonas  
sphaeroides* 257
- Mills, G. L., Cantino, E. C.  
Chitosome-Like Vesicles from Gamma Particles of  
*Blastochladiella emersonii* Synthesize Chitin 72
- Modi, V. V., see Shah, K., et al. 255
- Moll, J., see Perski, H.-J., et al. 319
- Mulders, J. W. M., see Lauwers, A. M., et al. 159
- Müller, H., Furter, R., Zähler, H., Rast, D. M.  
Metabolic Products of Microorganisms. 203. Inhibition of  
Chitosomal Chitin Synthetase and Growth of *Mucor rouxii*  
by Nikkomycin Z, Nikkomycin X, and Polyoxin A:  
A Comparison 195
- Nakatsubo, F., see Katayama, T., et al. 198
- Nandi, A. S., Sen, S. P.  
Mutants of *Rhizobium* Capable of Fixing N<sub>2</sub> in the Free-  
Living Condition 147
- Nelson, R. K., Orlowski, M.  
Spore Germination and Swarm Cell Morphogenesis in the  
Acellular Slime Mold *Fuligo septica* 189
- Neujahr, H. Y., see Gaal, A. 54
- Nishimoto, M., see Pan-Hou, H. S., et al. 93
- Ogawa, M., see Takata, N., et al. 90
- Oki, T., see Hamagishi, Y., et al. 134
- Oltmann, L. F., see Claassen, V. P., et al. 44
- Oren, A., Shilo, M.  
Bacteriorhodopsin in a Bloom of Halobacteria in The Dead  
Sea (Short Communication) 188
- Orlowski, M., see Nelson, R. K. 189
- Pan-Hou, H. S., Nishimoto, M., Imura, N.  
Possible Role of Membrane Proteins in Mercury Resistance  
of *Enterobacter aerogenes* 93
- Paone, D. A. M., see Stevens, S. E., Jr., et al. 204
- Parish, J. H., see Krüger, W. M. A. 150
- Pelzer, H., see Maass, D. 301
- Perski, H.-J., Moll, J., Thauer, R. K.  
Sodium Dependence of Growth and Methane Formation in  
*Methanobacterium thermoautotrophicum* 319
- Pfennig, N., see Bache, R. 250
- Pines, O., Gutnick, D. L.  
Relationship Between Phage Resistance and Emulsan  
Production, Interaction of Phages with the Cell-Surface of  
*Acinetobacter calcoaceticus* RAG-1 129
- Pitt, D. E., Bull, A. T.  
Free Amino Acid Pools of *Trichoderma aureoviride* During  
Conditions of Glucose-Limited Growth and Glucose  
Starvation 180
- Pokorný, V., see Holan, H., et al. 312
- Potts, M., Friedmann, E. I.  
Effects of Water Stress on Cryptoendolithic Cyanobacteria  
from Hot Desert Rocks 267
- Quaglia, M., see Häder, D.-P., et al. 78
- Rast, D. M., see Müller, H., et al. 195
- Reber, H. H., Kaiser, P.  
Regulation of the Utilization of Glucose and Aromatic  
Substrates in Four Strains of *Pseudomonas putida* 243
- Rigano, C., see Fuggi, A., et al. 349
- Robb, F. T., see Hare, P., et al. 276
- Rössle, M., Kreusch, J., Decker, K.  
Acetyl Coenzyme A and Coenzyme A Contents of Growing  
*Clostridium kluyveri* as Determined by Isotope Assays  
288
- Roomans, G. M., see Hovind-Hougen, K., et al. 339
- Royt, P. W.  
Facilitated Diffusion of 6-Deoxy-D-Glucose by the  
Oxidative Yeast, *Kluyveromyces lactis* 87
- t'Riet, J. v., see Claassen, V. P., et al. 44

- Sahm, H., et al., see Eggeling, L., et al. 362
- Schleifer, G., see Schmitt, W., et al. 334
- Schleifer, G., Schmitt, W., Knobloch, K.  
The Enzymatic System Thiosulfate: Cytochrome *c*  
Oxidoreductase from Photolithoautotrophically Grown  
*Rhodospseudomonas palustris* 328
- Schmitt, W., see Schleifer, G., et al. 328
- Schmitt, W., Schleifer, G., Knobloch, K.  
The Enzymatic System Thiosulfate: Cytochrome *c*  
Oxidoreductase from Photolithoautotrophically Grown  
*Chromatium vinosum* 334
- Sen, S. P., see Nandi, A. S. 147
- Shah, K., Sousa, S. de, Modi, V. V.  
Studies on Transducing Phage M-1 for *Rhizobium*  
*japonicum* D211 255
- Shilo, M., see Oren, A. 188
- Skorupska, A., see Derylo, M., et al. 322
- Snozzi, M., see Meyer, R., et al. 125
- Sousa, S. de, see Shah, K., et al. 255
- Steglich, W., see Kupka, J., et al. 223
- Steinmetz, M. A., Fischer, U.  
Cytochromes of the Non-Thiosulfate-Utilizing Green Sulfur  
Bacterium *Chlorobium limicola* 31
- Stephan, M. P., see Bothe, H., et al. 96
- Stevens, S. E., Jr., Balkwill, D. L., Paone, D. A. M.  
The Effects of Nitrogen Limitation on the Ultrastructure of  
the Cyanobacterium: *Agmenellum quadruplicatum* 204
- Stouthamer, A. H., see Claassen, V. P., et al. 44
- Stucki, G., Gälli, R., Ebersold, H.-R., Leisinger, T.  
Dehalogenation of Dichloromethane by Cell Extracts of  
*Hyphomicrobium* DM2 366
- Stupperich, E., Fuchs, G.  
Products of CO<sub>2</sub> Fixation and <sup>14</sup>C Labelling Patterns of  
Alanine in *Methanobacterium thermoautotrophicum* Pulse-  
Labelled with <sup>14</sup>CO<sub>2</sub> 294
- Suginaka, H., see Takata, N., et al. 90
- Sundermeyer, H., Bock, E.  
Energy Metabolism of Autotrophically and Heterotrophically  
Grown Cells of *Nitrobacter winogradskyi* 250
- Takata, N., Ogawa, M., Kosaki, G., Suginaka, H.  
Effect of 6059-S, Novel Oxacephum, on Cross-Linking  
Reaction of Peptidoglycan Biosynthesis in *Escherichia coli*,  
*Pseudomonas aeruginosa* and *Serratia marcescens* (Short  
Communication) 90
- Taylor, B. F., see Aftring, R. P. 101
- Taylor, C. D., see Cuhel, R. L., et al. 1, 8
- Thauer, R. K., see Perski, H.-J., et al. 319
- Then, J., see Imhoff, J. F., et al. 234
- Then, J., Trüper, H. G.  
The Role of Thiosulfate in Sulfur Metabolism of  
*Rhodospseudomonas globiformis* 143
- Theodorou, M. K., Bazin, M. J., Trinci, A. P. J.  
Growth of *Trichoderma reesei* and the Production of  
Cellulolytic Enzymes in a Continuous-Flow Column 372
- Tindall, B. J., see Imhoff, J. F., et al. 238
- Torre, A. de la, see Yee, B. C., et al. 14
- Trinci, A. P. J., see Theodorou, M. K., et al. 372
- Trüper, H. G., see Hensel, G. 228
- Trüper, H. G., see Imhoff, J. F., et al. 234, 238
- Trüper, H. G., see Then, J. 143
- Tsang, J. C., see Hindahl, M. S., et al. 307
- Tuzar, Z., see Holan, H., et al. 312
- Vona, V., see Fuggi, A., et al. 349
- Wee, S., see Hindahl, M. S., et al. 307
- Weltring, K.-M., Barz, W., Dewick, P. M.  
Degradation of 3,9-Dimethoxypterocarpan and Medicarpin  
by *Fusarium* Fungi 381
- Wiegel, J.  
 $\alpha$ -Isopropylmalate Synthase as a Marker for the Leucine  
Biosynthetic Pathway in Several Clostridia and in  
*Bacteroides fragilis* 385
- Wilkinson, B. J., see Hindahl, M. S., et al. 307
- Woods, D. R., see Hare, P., et al. 276
- Woolkalis, M. J., see Bang, S. S., et al. 111
- Yamanaka, G., Glazer, A. N.  
Dynamic Aspects of Phycobilisome Structure: Modulation of  
Phycocyanin Content of *Synechococcus* Phycobilisomes  
23
- Yee, B. C., Torre, A. de la, Crawford, N. A., Lara, C.,  
Carlson, D. E., Buchanan, B. B.  
The Ferredoxin/Thioredoxin System of Enzyme Regulation  
in a Cyanobacterium 14
- Yoshimoto, A., see Hamagishi, Y., et al. 134
- Zähner, H., see Müller, H., et al. 195
- Zumft, W. G., see Alef, K., et al. 138

